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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/908,993 | 07/19/2001 | Hiroshi Iizuka | M1953-35 | 6849 |

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EXAMINER

CINTINS, IVARS C

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/908,993

Applicant(s)

IIZUKA ET AL.

Examiner

Ivars C. Cintins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3,5-8,10,12-16,18,20,22,24 and 27 is/are rejected.
7) ☒ Claim(s) 2,4,9,11,17,19,21,23,25,26,28 and 29 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5-8 and 12-16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by published Japanese Patent Application No. 10-272370. The reference discloses plural parallel water softeners (1A & 1B), each having a sample conduit (5A & 5B) connected to a hardness detection device (3), and a control device (6) which controls regeneration of the individual softeners in the recited manner (see the abstract).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over published Japanese Patent Application No. 10-272370 in view of Tanabe et al. (U.S. Patent No. 5,811,012). The primary reference discloses the claimed invention with the exception of the recited non-regenerating polisher. Tanabe et al. discloses a system for purifying water, which system comprises a plurality of purification units, and further teaches (see col. 10, lines 10-13) utilizing a non-regenerating polisher in order to remove any residual ionic impurities from the previously purified water. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of the primary reference with the non-

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regenerating polisher of Tanabe et al., in order to obtain the advantages (i.e. residual contaminant removal) disclosed by this secondary reference for the system of the primary reference.

Claims 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over published Japanese Patent Application No. 10-272370 and Tanabe et al. as applied above, and further in view of Banham et al. (U.S. Patent No. 5,639,377). The modified primary reference discloses the claimed invention with the exception of the ionic form of the non-regenerating polisher. Banham et al. discloses a similar water softening system (see col. 1, line 16) having a polisher, and teaches that the media in the polisher should be the same as that in the main treatment unit (see col. 2, lines 33-44). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a polisher in sodium form in the system of the modified primary reference, since the main treatment units in this system are in sodium form, and Banham et al. teaches that the polisher should be in the same form as the rest of the treatment media.

Claims 24 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over published Japanese Patent Application No. 10-272370 in view of published Japanese Patent Application No. 10-177019. The primary reference discloses the claimed invention with the exception of the recited pump for delivering the sample of treated water to the measuring device at a constant pressure and constant flow. Published Japanese Patent Application No. 10-177019 discloses a similar water softening system, and teaches pumping a sample of treated water to a hardness sensor at a constant flow and low pressure, in order to prevent hardness sensor failure (see the last three lines of the abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of the primary reference with the

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constant pressure and constant flow pump of the secondary reference, in order to prevent hardness sensor failure in the system of this primary reference.

Claims 2, 4, 9, 11, 17, 19, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims because the references of record do not teach or fairly suggest a water softening system of the type recited, wherein water is sampled from inside a resin layer of each of the water softeners.

Claims 25, 26, 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowed if rewritten in independent form to include all of the limitations of the base claim and any intervening claims because the references of record do not teach or fairly suggest a water softening system of the type recited, including means for maintaining the sample of treated water at a constant temperature.

Applicant's arguments filed May 26, 2004 have been noted and carefully considered, but no longer appear to be relevant in view of the new grounds of rejection.

Applicant should note that a copy of published Japanese Patent Application No. 10-272370 is not being supplied with this Office action, because this reference was cited by Applicant in the IDS filed February 14, 2002. Similarly, a copy of published Japanese Patent Application No. 10-177019 is not being supplied with this Office action, because this reference was cited by Applicant in the IDS filed June 30, 2003.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
August 22, 2004